

PATENT COOPERATION TREATY

WO 99/60132
PCT/EP99/03344

From the INTERNATIONAL BUREAU

NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

WALTON, Seán, M.
Mewburn Ellis
York House
23 Kingsway
London WC2B 6HP
ROYAUME-UNI

03 DEC 1999

Date of mailing (day/month/year) 25 November 1999 (25.11.99)		
Applicant's or agent's file reference SMWFP5769302		IMPORTANT NOTICE
International application No. PCT/EP99/03344	International filing date (day/month/year) 14 May 1999 (14.05.99)	Priority date (day/month/year) 19 May 1998 (19.05.98)
Applicant ISTITUTO DI RICERCHE DI BIOLOGIA MOLECOLARE P. ANGELETTI S.P.A. et al		

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:
AU,CN,EP,IL,JP,KP,KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:
AE,AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,CA,CH,CU,CZ,DE,DK,EA,EE,ES,FI,GB,GD,GE,GH,GM,HR,
HU,ID,IN,IS,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MD,MG,MK,MN,MW,MX,NO,NZ,OA,PL,PT,RO,RU,
SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,UA,UG,UZ,VN,YU,ZA,ZW
The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).
3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 25 November 1999 (25.11.99) under No. WO 99/60132

REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

J. Zahra

Telex No. (41-22) 740.14.35

Telephone No. (41-22) 338.83.38

Form PCT/IB/308 (July 1996)

2960242

Continuation of Form PCT/IB/308

**NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF
THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES**

Date of mailing (day/month/year) 25 November 1999 (25.11.99)	IMPORTANT NOTICE
Applicant's or agent's file reference SMWFP5769302	International application No. PCT/EP99/03344
<p>The applicant is hereby notified that, at the time of establishment of this Notice, the time limit under Rule 46.1 for making amendments under Article 19 has not yet expired and the International Bureau had received neither such amendments nor a declaration that the applicant does not wish to make amendments.</p>	

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 99/03344

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/40 C07K14/18 C12N15/62 A61K39/29 C07K16/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C07K C12N A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	TAFI R ET AL: "Identification of HCV core mimotopes: Improved methods for the selection and use of disease-related phage-displayed peptides" BIOLOGICAL CHEMISTRY, vol. 378, no. 6, June 1997 (1997-06), pages 495-502, XP002120164 ISSN:0177-3593 page 500, right-hand column ---	1-34, 85-96
Y	WO 96 40764 A (US DEPARTMENT OF HEALTH AND HUMAN SERVICES) 19 December 1996 (1996-12-19) figures 2A-2K --- -/--	1-34, 85-96

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

25 October 1999

Date of mailing of the international search report

05/11/1999

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Cupido, M

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 99/03344

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JACKSON P ET AL: "Reactivity of synthetic peptides representing selected sections of hepatitis C core and envelope proteins with a panel of hepatitis C virus-seropositive human plasma" JOURNAL OF MEDICAL VIROLOGY, vol. 51, no. 1, January 1997 (1997-01), pages 67-79, XP002120165 table II	45-57, 68-70,84
X	--- KATO N ET AL: "Susceptibility of human T-lymphotropic virus type I infected cell line MT-2 to hepatitis C virus infection" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 206, no. 3, 26 January 1995 (1995-01-26), pages 863-869, XP002120166 ORLANDO, FL US figure 2	45-57
X	--- ZIBERT A ET AL: "Epitope mapping of antibodies directed against hypervariable region 1 in acute self-limiting and chronic infections due to hepatitis C virus." JOURNAL OF VIROLOGY, vol. 71, no. 5, May 1997 (1997-05), pages 4123-4127, XP002120167 AMERICAN SOCIETY FOR MICROBIOLOGY US figures 1,3	68,84
P,X	--- PUNTORIERO G ET AL: "Towards a solution for hepatitis C virus hypervariability: mimotopes of the hypervariable region 1 can induce antibodies cross-reacting with a large number of viral antigens" EMBO JOURNAL, vol. 17, no. 13, 1 July 1998 (1998-07-01), pages 3521-3533, XP002120168 EYNHAM, OXFORD GB the whole document	1-96
P,X	--- PATENT ABSTRACTS OF JAPAN vol. 1999, no. 10, 31 August 1999 (1999-08-31) & JP 11 124398 A (JAPAN ENERGY CORP), 11 May 1999 (1999-05-11) abstract -----	1-34

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP 99/ 03344

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Remark: Although claims 71-73, 78-83 and 90-96
are directed to a method of treatment of the human or animal
body, the search has been carried out and based on the alleged
effects of the compound or composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such
an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all
searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment
of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report
covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is
restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 99/03344

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9640764 A	19-12-1996	AU 6157996 A CA 2221313 A EP 0832114 A	30-12-1996 19-12-1996 01-04-1998
JP 11124398 A	11-05-1999	NONE	

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference SMWFP5769302	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 99/ 03344	International filing date (day/month/year) 14/05/1999	(Earliest) Priority Date (day/month/year) 19/05/1998
Applicant ISTITUTO DI RICERCHE DI BIOLOGIA MOLECOLARE P. ANG		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.
☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the International search was carried out on the basis of the International application in the language in which it was filed, unless otherwise indicated under this item.

☐ the International search was carried out on the basis of a translation of the International application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the International application, the International search was carried out on the basis of the sequence listing:

☐ contained in the International application in written form.

☐ filed together with the International application in computer readable form.

☒ furnished subsequently to this Authority in written form.

☒ furnished subsequently to this Authority in computer readable form.

☒ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the International application as filed has been furnished.

☒ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this International search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP 99/ 03344

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
**Remark: Although claims 71-73, 78-83 and 90-96
are directed to a method of treatment of the human or animal
body, the search has been carried out and based on the alleged
effects of the compound or composition.**
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such
an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all
searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment
of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report
covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is
restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

PCT/EP 99/03344

IPC 6 C12N15/40 C07K14/18 C12N15/62 A61K39/29 C07K16/10

IPC 6 C07K C12N A61K

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JACKSON P ET AL: "Reactivity of synthetic peptides representing selected sections of hepatitis C core and envelope proteins with a panel of hepatitis C virus-seropositive human plasma" JOURNAL OF MEDICAL VIROLOGY, vol. 51, no. 1, January 1997 (1997-01), pages 67-79, XP002120165 table II	45-57, 68-70,84
X	KATO N ET AL: "Susceptibility of human T-lymphotropic virus type I infected cell line MT-2 to hepatitis C virus infection" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 206, no. 3, 26 January 1995 (1995-01-26), pages 863-869, XP002120166 ORLANDO, FL US figure 2	45-57
X	ZIBERT A ET AL: "Epitope mapping of antibodies directed against hypervariable region 1 in acute self-limiting and chronic infections due to hepatitis C virus." JOURNAL OF VIROLOGY, vol. 71, no. 5, May 1997 (1997-05), pages 4123-4127, XP002120167 AMERICAN SOCIETY FOR MICROBIOLOGY US figures 1,3	68,84
P,X	PUNTORIERO G ET AL: "Towards a solution for hepatitis C virus hypervariability: mimotopes of the hypervariable region 1 can induce antibodies cross-reacting with a large number of viral antigens" EMBO JOURNAL, vol. 17, no. 13, 1 July 1998 (1998-07-01), pages 3521-3533, XP002120168 EYNHAM, OXFORD GB the whole document	1-96
P,X	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 10, 31 August 1999 (1999-08-31) & JP 11 124398 A (JAPAN ENERGY CORP), 11 May 1999 (1999-05-11) abstract	1-34

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 99/03344

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9640764 A	19-12-1996	AU 6157996 A CA 2221313 A EP 0832114 A	30-12-1996 19-12-1996 01-04-1998
JP 11124398 A	11-05-1999	NONE	